State Government Digital Preservation Profiles

Virginia LARM

July 2006

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Introduction

The state government digital preservation profiles available on this Web page are based on information collected from those state and territorial library, archives, and records management units that completed CTG's State Government Digital Information Preservation Survey. CTG administered the survey to all state and several territorial librarians, archivists, and records managers in early 2006. See baseline report for details.

The profiles are organized by state or territory and the library (**L**), archives (**A**), and records management (**RM**) units that were represented in the survey response. (For example, "**Alabama ARM**," which is the first responding unit in the drop down menu below, refers to the **a**rchives and **r**ecords **m**anagement units from Alabama in one survey response.) For some states, respondents also included agencies other than library, archives, and records management. These profiles are marked with an asterisk (*****) and the other units that contributed to the survey response are specified in the profiles.

To select a different profile, click on the Introduction/Select Profile link located on the top left of the screen.

You can also view consolidated tables showing how all the state/territory responding units replied to selected questions in the survey. (This is also found in Appendix E of Preserving State Government Digital Information: A Baseline Report.)
STATE PROFILES CONTACT
G. Brian Burke, Project Manager
Center for Technology in Government
University at Albany, SUNY

Section 1. Responding Unit(s)

Name of state or territory.
VIRGINIA

Name and affiliation of individual(s) who responded on behalf of the state or territory.
Conley L. Edwards, State Archivist and Director, Archival & Records Management Services, Library of Virginia

Kathy Jordan, Electronic Resources Manager, Library of Virginia

This profile includes information provided by the following units for this state:
- Library
- Archives
- Records Management

Section 2.1a. Setting Standards for EXECUTIVE Agencies

The following units have authority for setting standards, specified below, for digital information created or maintained by EXECUTIVE agencies. Multiple boxes are checked to reflect authority that is shared or delegated.

	Authority not assigned	Library has authority	Archives has authority	Records Management has authority	Others (See below)
Setting data management standards and or guidelines for information creation (e.g., metadata, file formats).		X		X	X
Setting information technology standards and or guidelines for information creation (e.g., state approved software applications).					X
Setting standards for information retention and disposal (e.g., retention periods and methods of disposal) for various series/types of digital records and publications.		X		X	

Other standards and the units with authority over setting them.
No information provided

Additional information.
The Virginia Information Technology Agency (VITA) and Council of Technology Services (COTS) have responsibilities for setting standards. See the Enterprise Architecture section at this Web site http://www.vita.virginia.gov/ for examples.

Section 2.1b. Services Provided to EXECUTIVE Agencies

The following units provide the services, specified below, to EXECUTIVE agencies. If services are provided by multiple units, the appropriate boxes are checked.

	Services not provided	Library provides services	Archives provides services	Records Manage-ment provides services	Others (See below)
Storage for digital information.		X			
Consultation and training services on digital information creation.				X	
Consultation and training services on digital information management.				X	
Consultation and training services on digital information preservation.				X	
Consultation and training services on digital information preservation.				X	
Preservation (e.g., migration, reformatting).		X	X		
Access (e.g., search engine).		X	X		
Certification (e.g., trustworthiness of system, backups sufficient).	X				

Other services provided and the units that provide them.
No information provided

Additional information.
Responses to the sections on services provided to agencies reflect that the functions fall under the same administrative agency. The services that are not provided by the archival or records management components are assigned to the Library. For example, storage of digital information is a responsibility of the information technology department of the library. Shared services are so indicated.

Section 2.2a. Setting Standards for LEGISLATIVE Agencies

The following units have authority for setting standards, specified below, for digital information created or maintained by LEGISLATIVE agencies. Multiple boxes are checked to reflect authority that is shared or delegated.

	Authority not assigned	Library has authority	Archives has authority	Records Manage-ment has authority	Others (See below)
Setting data management standards and or guidelines for information creation (e.g., metadata, file formats).	X				
Setting information technology standards and or guidelines for information creation (e.g., state approved software applications).	X				
Setting standards for information retention and disposal (e.g., retention periods and methods of disposal) for various series/types of digital records and publications.		X		X	

Other standards and the units with authority over setting them.
No information provided

Additional information.
VITA functions for Executive Branch agencies only.

Section 2.2b. Providing Service to LEGISLATIVE Agencies

The following units provide the services, specified below, to LEGISLATIVE agencies. If services are provided by multiple units, the appropriate boxes are checked.

	Services not provided	Library provides services	Archives provides services	Records Manage-ment provides services	Others (See below)
Storage for digital information.		X			
Consultation and training services on digital information creation.				X	
Consultation and training services on digital information management.				X	
Consultation and training services on digital information preservation.				X	
Consultation and training services on digital information preservation.				X	
Preservation (e.g., migration, reformatting).		X	X		
Access (e.g., search engine).		X	X		
Certification (e.g., trustworthiness of system, backups sufficient).	X				

Other services provided and the units that provide them.
No information provided

Additional information.
No information provided

Section 2.3a. Setting Standards for JUDICIAL Agencies

The following units have authority for setting standards, specified below, for digital information created or maintained by JUDICIAL agencies. Multiple boxes are checked to reflect authority that is shared or delegated.

	Authority not assigned	Library has authority	Archives has authority	Records Management has authority	Others (See below)
Setting data management standards and or guidelines for information creation (e.g., metadata, file formats).	X				
Setting information technology standards and or guidelines for information creation (e.g., state approved software applications).	X				
Setting standards for information retention and disposal (e.g., retention periods and methods of disposal) for various series/types of digital records and publications.		X		X	

Other standards and the units with authority over setting them.
No information provided

Additional information.
No information provided

Section 2.3b. Providing Service to JUDICIAL Agencies

The following units provide the services, specified below, to LEGISLATIVE agencies. If services are provided by multiple units, the appropriate boxes are checked.

	Services not provided	Library provides services	Archives provides services	Records Manage-ment provides services	Others (See below)
Storage for digital information.		X			
Consultation and training services on digital information creation.				X	
Consultation and training services on digital information management.				X	
Consultation and training services on digital information preservation.				X	
Consultation and training services on digital information preservation.				X	
Preservation (e.g., migration, reformatting).		X	X		
Access (e.g., search engine).		X	X		
Certification (e.g., trustworthiness of system, backups sufficient).	X				

Other services provided and the units that provide them.
No information provided

Additional information.
No information provided

Section 3. State Government Digital Information Preservation Activities

This section includes descriptions of past or current digital preservation activities in the state.

TITLE OF THE STATE GOVERNMENT DIGITAL INFORMATION PRESERVATION ACTIVITY:
Centera storage system

SHORT DESCRIPTION:
In spring 2004, the Library purchased a Centera system from EMC Corp. With this system, we have the space to store approximately 4 TB of fixed electronic content. The system provides remote dual replication of the content (12TB) for a total of about 16 TB of content. The Library has 2 'boxes' at our downtown location and 2 at our State Records Center located approximately 5 miles east of the downtown location.

The system is managed by the Library's Network Engineer. Access to the server that communicates with the Centera is limited through the use of permissions that are granted on segments (folders) of the server on a case by case basis.

The Library stores only born digital content and preservation copies of 'important' digitized content on the Centera.

LINKS TO RELATED WEB SITES OR PROJECT DOCUMENTS:
http://www.emc.com/products/systems/centera.jsp

CONTACT FOR THIS ACTIVITY:
On current use of the Centera:
Kathy Jordan, Electronic Resources Manager
kjordan@lva.lib.va.us

Technical questions:
Rebecca Morgan, Network Engineer
rmorgan@lva.lib.va.us

TITLE OF THE STATE GOVERNMENT DIGITAL INFORMATION PRESERVATION ACTIVITY:
DigiTool Digital Asset Management System

SHORT DESCRIPTION:
Pending funding from the Virginia Legislature, the Library is planning to purchase DigiTool, an Ex Libris product, to describe, manage and provide public access to electronic content in the Library's collections.

This product uses library and archives standards in descriptive and other metadata practices, including METS, MARC21, Dublin Core, etc. Other features include an Institutional Repository module, batch ingest, template building, and support for JPEG2000, OAI-PMH and Z39.50. DigiTool does not store the content; rather the system allows for the metadata to be 'attached' to content living elsewhere that is accessed via URLs.

Most appealing is the potential cross-functional application of this product at the Library. Anticipated uses for the product include not only emerging digital initiatives, but also the submission & management of electronically created state agency publications and traditional electronic records (including the 1.5 gig of electronic records recently received from the administration of Governor Mark Warner).

While this product will not solve the long-term preservation issues associated with software and hardware obsolescence, it will allow the Library to appropriately identify and manage the content in a responsible way that will hopefully facilitate transfer to newer technologies as necessary.

LINKS TO RELATED WEB SITES OR PROJECT DOCUMENTS:
http://www.exlibrisgroup.com/digitool.htm

CONTACT FOR THIS ACTIVITY:
Kathy Jordan, Electronic Resources Manager
kjordan@lva.lib.va.us

TITLE OF THE STATE GOVERNMENT DIGITAL INFORMATION PRESERVATION ACTIVITY:
EmailXtender

SHORT DESCRIPTION:
EmailXtender is a Legato product. It is traditionally used to manage email at the point of creation throughout an organization. The Library is using it as a way to manage and provide access to the archival email from most recent Governor's administration (250 .pst files).   EmailXtender allows full text searching of email messages, attachments and calendars. Platforms it supports include Microsoft Exchange, Lotus Notes/Domino, UNIX SendMail, Bloomberg Mail and Instant Messaging. It is no way a permanent solution to the Library's archival records containing email, but it will permit us to manage the content, which will be stored on the Centera, and provide access to users.

LINKS TO RELATED WEB SITES OR PROJECT DOCUMENTS:
http://www.legato.com/products/emailxtender/emailxtender.htm

CONTACT FOR THIS ACTIVITY:
On current use of EmailXtender:
Kathy Jordan, Electronic Resources Manager
kjordan@lva.lib.va.us

Technical questions:
Rebecca Morgan, Network Engineer
rmorgan@lva.lib.va.us

TITLE OF THE STATE GOVERNMENT DIGITAL INFORMATION PRESERVATION ACTIVITY:
State Publications Depository Program

SHORT DESCRIPTION:
The State Document Depository Program was established in 1981 to guarantee access to government information, regardless to proximity to Richmond, and to ensure that information published by state agencies remains available to the public. There are 12 depository libraries in Virginia, in addition to the Library of Virginia. As of February 2006, legislation is pending in the Virginia Legislature that would reinforce the Library's role as the permanent custodian of government publications in electronic format and would give the Library the responsibility of establishing guidelines for the submission of electronic publications.

The Library is already investigating various ways to respond to these mandates. While the LOCKSS system is being considered an option, the Library is already looking at utilizing DigiTool's Institutional Repository feature for the ingest, management and delivery of electronic state publications.

Ahead of the implementation of either LOCKSS or DigiTool, a database has been developed with which creators of these documents will submit metadata and URLs for delivery of the content. Currently, the plan is to maintain preservation copies of the content on the Centera and to continue to point to the live link on the agencies' sites until they no longer exist and must be replaced by a Library hosted file.

The Web archiving tool, Archive-it, is also being considered for discovery and maintenance of content relevant to the State Publications Depository Program collection policy.

LINKS TO RELATED WEB SITES OR PROJECT DOCUMENTS:
http://www.lva.lib.va.us/whatwedo/statedocs/index.htm

CONTACT FOR THIS ACTIVITY:
Mary Clark, Government Documents Program Director
mclark@lva.lib.va.us

TITLE OF THE STATE GOVERNMENT DIGITAL INFORMATION PRESERVATION ACTIVITY:
Web site archiving

SHORT DESCRIPTION:
Following a pilot project in the fall of 2005, the Library has begun a subscription to the Internet Archive's new Web archiving service, Archive-It. Current collection policies include the Web sites of the Governor and his

administration, selected state-sponsored projects of interest, and candidates for state-wide election and related sites.

The tool allows for the creation and management of Web archive collections. Features allow for reporting, creating descriptive metadata using a Dublin Core subset, scheduling of crawls, and full-text searching. While there are limitations, mostly to the delivery of the content through the Wayback Machine, the service is by far the best solution currently available to meet the agency's Web archiving needs. All data is stored in the non-proprietary ARC file format, and all tools for managing the format and crawling the data are open-source. Content is stored in one of the Internet Archive's data centers, primary and backup copies are made available online, and the Library has the option of obtaining a copy of all content for a dark archive stored on Library servers.

The Internet Archive is a respected leader in the Web archiving community; has established strong working relationships with major institutions, including national libraries and archives around the world; and is a charter member of the International Internet Preservation Consortium (IIPC), whose mission it is 'to acquire, preserve and make accessible knowledge and information from the Internet for future generations everywhere, promoting global exchange and international relations.' These features, combined with the functionality of the tool, make this an appealing solution to our Web archiving needs.

LINKS TO RELATED WEB SITES OR PROJECT DOCUMENTS:
www.archive.org

www.archive-it.org

www.lva.lib.va.us/whatwehave/webarchive/

http://www.netpreserve.org/about/index.php

CONTACT FOR THIS ACTIVITY:
Kathy Jordan, Electronic Resources Manager
kjordan@lva.lib.va.us

Section 4. Training Needs for Digital Preservation Related Activities

Level of training needed for the digital preservation capabilities, specified below.

	Training already provided	Basic training needed	Advanced training needed
Identify the type and amount of digital information throughout the state.		X	
Select and appraise state government information in digital form.		X	
Identify key stakeholders related to specific digital information (other local/state agencies, other states, private sector, etc.).		X	
Negotiate and make agreements with key stakeholders to preserve digital information.		X	
Acquire state government information in digital form for holdings.			X
Manage state government information in digital form (metadata, reformatting, etc.).		X	
Manage the ingest of digital information into a repository.			X
Manage the long-term storage of digital information in a repository.			X
Develop mechanisms to monitor the long-term usability of state government information in digital form.		X	
Make state government information in digital form accessible to users.			X
Produce a disaster and recovery planning for state government information in digital form.		X	
Manage copyright, security, and other legal issues of relevance to state government digital information.			X
Other (See below).			

Other training needed for digital preservation capability.
No information provided

Additional information on existing training programs.
Legislation currently before the legislature amends the State Publications Depository Program to include electronic publications, and clarifies that the requirements of the Program apply to all state agencies in any branch of government. The bill allows The Library of Virginia to authorize agencies to send certain publication information to the Library, instead of the publications themselves, to facilitate the collection and dissemination of state publications in electronic form.

Section 5. State Government Digital Information Currently At-Risk #1

This section includes examples of state government digital information that is at-risk of deteriorating or being altered or lost through format or technological obsolescence, policy or procedural gaps, or financial constraints.

DESCRIPTION OF AT-RISK STATE GOVERNMENT DIGITAL INFORMATION:
No information provided

CONDITIONS CAUSING INFORMATION TO BE AT-RISK:
Virginia has been in the process of consolidating IT services into one agency, the Virginia Information Technology Agency. The Commonwealth and Northrop Grumman Corporation formed a partnership in November 2005 to modernize the state's information technology infrastructure. This groundbreaking public-private partnership amounts to a ten-year, $2 billion contract. There is uncertainty about the effect of this arrangement on many of the issues associated with this survey but it could well place some digital information at risk if long term values of the information are not considered.

Obsolescence of hardware, software, and media are continuing issues that place digital information at-risk. As an agency, we have yet to face those issues with digital records in our collections.

STRATEGIES CONSIDERED TO PRESERVE AT-RISK STATE GOVERNMENT DIGITAL INFORMATION:
Revisions to the Virginia Public Records Act are now before the legislature. See response in Section 7. Additional Thoughts or Comments..

Examples of government digital information that was not preserved and is no longer accessible.
In 2002, two tapes containing e-mail from an outgoing governor were physically lost while awaiting transfer to the state archives.

Section 6. Enterprise Architecture

The following section describes the state's and corresponding units' awareness of and involvement in their state's Enterprise Architecture efforts.

Aware of state's Enterprise Architecture efforts.
Yes

Involved in state's Enterprise Architecture efforts.
No

Nature of involvement in the state's Enterprise Architecture efforts, if appropriate.
No information provided

Links to relevant documentation that describes the unit's involvement in the state's Enterprise Architecture efforts.
Link to State's enterprise architecture site: http://www.vita.virginia.gov/cots/ea/

Section 7. Additional Thoughts or Comments

Revisions to our Public Records Act are currently before our legislature for approval. Among the newly defined terms in the revised act are 'conversion,' 'electronic record,' 'lifecycle,' 'metadata,' and 'migration.' New provisions also require each agency to ensure that its public records are preserved, maintained, and accessible throughout their lifecycle, including converting and migrating electronic records as often as necessary so that information is not lost due to hardware, software, or media obsolescence or deterioration. The Library Board may issue regulations and guidelines designed to facilitate the creation, preservation, storage, filing, reformatting, management, and destruction of public records by agencies.